

ABSTRACT

Introduction: Occlusal plane orientation is one of the most vital clinical procedures in rehabilitating edentulous patients with complete denture prosthesis because it will have a direct effect on aesthetics, function and denture stability. The use of Ala-tragal line still remains controversial. It is mainly due to the disagreement, as to which point on the tragus whether superior, middle or inferior point to be used as exact point of reference to establish the Ala-tragal line in various situations. The present study was undertaken to determine the relative parallelism of the different Ala-Tragal lines and Camper's plane to the occlusal plane in dentulous subjects having three different anatomical head forms using landmarks on a lateral cephalograms.

Keywords: Occlusal plane, Ala-tragal line, Camper's plane, Lateral cephalograms, Complete denture, Anatomical head form.

Aim: To determine the most appropriate point on tragus to be used as a posterior reference point at the time of marking ala tragus line while establishing occlusal plane in three different anatomical head forms.

Materials and methods: 60 Dentate subjects were selected as per predetermined criteria. They were grouped according to their cephalic index values into three groups as Brachycephalic, Mesocephalic and Dolichocephalic head form. Further they were subdivided into male and female. Markings with Radiopaque marker of 1mm diameter were adhered against the superior, middle and inferior border of the tragus and against the lower border of ala of the nose. Lateral cephalograms were obtained for all the subjects. Tracings were performed digitally for all of these radiographs using DICOM software.

Results: In Brachycephalic male subjects the middle ala-tragal line was found to be relatively parallel to the occlusal plane than the camper's plane. In brachycephalic female subjects the middle ala tragal line was found to be relatively parallel to the occlusal plane and there is no relationship between the camper's plane and occlusal plane and camper's plane and three different ala-tragal lines. In Mesocephalic male subjects the inferior ala-tragal line was found to be relatively parallel to the occlusal plane and there is no relationship between the camper's plane and occlusal plane and camper's plane and three different ala-tragal lines. In Mesocephalic female subjects the superior ala-tragal line was found to be relatively parallel to the occlusal plane than the camper's plane. In Dolichocephalic male subjects the middle ala-tragal line was found to be relatively parallel to the occlusal plane and there is no relationship between the camper's plane and occlusal plane and camper's plane and three different ala-tragal lines. In Dolichocephalic female subjects the inferior ala-tragal line was found to be relatively parallel to the occlusal plane than the camper's plane.

Conclusion: For Brachycephalic male and female subjects the posterior reference point for establishing the ala-tragal line was found to be *middle* part of the tragus of ear. For Mesocephalic male subjects the posterior reference point for establishing the ala-tragal line was found to be *inferior* border and for female it was *superior* border of the tragus of ear. For Dolichocephalic male subjects the posterior reference point for establishing the ala-tragal line was found to be *middle* part and for female it was *inferior* border of the tragus of ear.